What is Claimed is:

1.   A vital signs detection system comprising:

a terminal capable of being connected to detecting means of detecting vital signs;

a program server of storing a program and/or data to operate said detecting means; and

an information server of communicating with said terminal; wherein:

when an operation switch of said detecting means is turned ON, said terminal transmits information including the type of said detecting means to said program server;

on receiving said information, said program server transmits a predetermined program and/or data corresponding to said information to said terminal according to said information;

said detecting means operates according to said predetermined program and/or data received by said terminal, and thereby detects vital signs; and

said terminal transmits the vital signs detected by said detecting means to said information server.

2.   A vital signs detection method utilizing:

a terminal capable of being connected to detecting means of detecting vital signs;

a program server of storing a program and/or data to make said detecting means operate; and

an information server of communicating with said terminal;

and comprising:

the step in which when an operation switch of said detecting means is turned ON, said terminal transmits information including the type of said detecting means to said program server;

the step in which on receiving said information, said program server transmits a predetermined program and/or data corresponding to said information to said terminal;

the step in which said detecting means operates according to said predetermined program and/or data received by said terminal, and thereby detects vital signs; and

the step in which said terminal transmits the vital signs detected by said detecting means to said information server.

3.   A terminal capable of being connected to detecting means of detecting vital signs, wherein:

said terminal communicates with a program server of storing a program and/or data to make said detecting means operate, and with an information server for storing vital signs detected by said detecting means;

when an operation switch of said detecting means is turned ON, said terminal transmits information including the type of said detecting means to said program server;

on receiving said information, said program server transmits a predetermined program and/or data to said terminal according to said information; said detecting means operates according to said predetermined program and/or data received

by said terminal, and thereby detects vital signs; and said terminal transmits the vital signs detected by said detecting means to said information server.

4.   A program server for communicating with a terminal capable of being connected to detecting means of detecting vital signs, and for storing a program and/or data to make said detecting means to operate, wherein:

when an operation switch of said detecting means is turned ON and thereby said terminal transmits information including the type of said detecting means, said program server receives said information and then transmits a predetermined program and/or data corresponding to said information to said terminal according to said information;

said detecting means operates according to said predetermined program and/or data received by said terminal, and thereby detects vital signs; and

said terminal transmits the vital signs detected by said detecting means to said information server.

5.   An information server of communicating with a terminal capable of being connected to detecting means of detecting vital signs, wherein:

said terminal communicates also with a program server for storing a program and/or data to make said detecting means operate;

when an operation switch of said detecting means is turned

ON and thereby said terminal transmits information including the type of said detecting means to said program server,

said program server receives said information and then transmits a predetermined program and/or data corresponding to said information to said terminal;

said detecting means operates according to said predetermined program and/or data received by said terminal, and thereby detects vital signs; and

when said terminal transmits the vital signs detected by said detecting means, said information server receives said vital signs.

6.   A vital signs processing apparatus comprising:

vital signs detecting means of detecting vital signs; and

vital signs processing means of processing, storing, and displaying said vital signs detected by said vital signs detecting means; wherein:

said vital signs detecting means comprises at least:

buffering means of temporarily storing said detected vital signs; and

first communicating means of communicating with said vital signs processing means;

said vital signs processing means comprises at least:

second communicating means of communicating with said vital signs detecting means;

storing means of storing said vital signs;

processing means of processing said vital signs stored
in said storing means according to a predetermined program and/or
data; and

displaying means of displaying said vital signs stored
in said storing means and/or output data of said processing means.

7.   The vital signs processing apparatus according to Claim
6 wherein said vital signs processing means further comprises
third communicating means of communicating with an external
server.

8.   The vital signs processing apparatus according to Claim
6 wherein:

said buffering means and said storing means comprise a
removable medium which can be detached; and

said removable medium is transferred between said vital
signs detecting means and said vital signs processing means,
whereby the data stored in said removable medium is transferred.

9.   The vital signs processing apparatus according to any of
Claims 6-8, wherein:

said vital signs detecting means is composed of a pulse
wave sensor for measuring the pulse wave of a user; and

said processing means comprises: frequency processing
means of performing FFT (fast Fourier transformation) processing
onto the frequency of said pulse wave; heart rate measuring means
of measuring heart rate from the output of said frequency
processing means; and calorie consumption calculating means of

calculating calorie consumption from said heart rate.

10.   The vital signs processing apparatus according to Claim 9 wherein:

said vital signs processing means further comprises FFT processing means of performing FFT processing onto said heart rate;

according to the result of said FFT processing, it is determined whether said user is exercising or not; and

when it is determined that said user is not exercising, and when said heart rate exceeds a predetermined set value, said calorie consumption calculating means does not use said measured heart rate, but calculates calorie consumption according to said user's resting heart rate stored previously.

11.   The vital signs processing apparatus according to Claim 9 further comprising inputting means of permitting a user to input: personal data including one's name, age, and sex; health control indices including daily, weekly, monthly, and final target values for calorie consumption; and exercise indices including upper and lower limits for heart rate at exercise, and exercise time.

12.   The vital signs processing apparatus according to Claim 11 wherein said health control indices and said exercise indices are displayed on said displaying means.

13.   The vital signs processing apparatus according to Claim 9 further comprising notifying means of warning said user when

said heart rate falls outside the range between said upper and lower limits for heart rate having been input through said inputting means.

14. The vital signs processing apparatus according to Claim 11 wherein:

said processing means performs: the accumulation of said calorie consumption; the calculation of the difference from said target value; the calculation of the degree of achievement to said target value; and the calculation of the expected time of achieving said target value at the current pace of calorie consumption; and then stores these data in a region different from that of said vital signs data, within said storing means; and

said displaying means displays: the time series of the change in said heart rate and said calorie consumption; said accumulated value of calorie consumption; and said expected time of achieving said target value.

15. The vital signs processing apparatus according to Claim 6 wherein:

said vital signs detecting means is used as said detecting means connected to said terminal in Claim 3; and

said vital signs processing means is used as said terminal in Claim 3.

16. The vital signs processing apparatus according to Claim 6 wherein said vital signs detecting means and said vital signs

processing means are used as said detecting means connected to said terminal in Claim 3.

17.   A health control method wherein a vital signs processing apparatus according to any of Claims 7,5 or 16 is used, whereby the health of a user of said vital signs processing apparatus is controlled according to instructions from a health control instructor who is a server user of said information server or said server, wherein

said method comprises:

a first step in which said information server or said server generates a health control program including all or part of the exercise indices, the exercise menu, and the health control indices of said user of said health vital signs processing apparatus according to a user chart containing vital signs including the height, the weight, the body fat percentage, and the temperature of said user, and then transmits said program to said vital signs processing apparatus;

a second step in which said vital signs processing apparatus receives said health control program, and in which said user uses said vital signs processing apparatus in accordance with said health control program, and thereby acquires said user's vital signs;

a third step in which said information server or said server renews said health control program according to said acquired measurement data; and

a fourth step in which when said measurement data falls outside the range of the values set in said health control program, said vital signs processing apparatus transmits warning information for requesting attention to said information server or said server; and wherein:

on recognizing said warning information, said health control instructor determines and alters said exercise indices and/or said exercise menu in said health control program according to said warning information;

said information server or said server transmits said altered exercise indices and/or exercise menu to said vital signs processing apparatus; and

when said vital signs processing apparatus receives said altered exercise indices and/or exercise menu, said user takes exercise according to said exercise indices and/or exercise menu.

18.   The health control method according to Claim 17 wherein:

said vital signs processing apparatus transmits prompt information for requesting the renewal of said measurement data, to said user;

on recognizing said prompt information, said user determines and operates said vital signs processing apparatus according to said prompt information; and

said vital signs processing apparatus acquires new measurement data, and then transmits them to said information

server or said server.

19.   The health control method according to Claim 17 wherein:

said information server or said server transmits prompt information for requesting the renewal of said acquired measurement data, to said user;

on recognizing said prompt information, said user of said vital signs processing apparatus determines and operates said information server or said server according said prompt information; and

on receiving new measurement data, said information server or said server generates a new health control program based on said data.

20.   The health control method according to Claim 18 or 19 wherein said prompt information is output when said measurement data is not renewed for a predetermined time or longer.

21.   The health control method according to Claim 18 wherein said prompt information includes the method of operation of said vital signs processing apparatus for said user to renew said measurement data.

22.   The health control method according to Claim 19 wherein said prompt information includes the operation method of said information server or said server for said user of said vital sign processing apparatus.

23.   The health control method according to Claim 17 wherein:

said information server or said server further comprises

a user ID (identifier) table for storing user IDs for corresponding the user chart of each user to that user uniquely; and

said user ID is transmitted together with said health control program to said health control apparatus.

24. A program of operating a computer as all or part of said terminal capable of being connected to detecting means of detecting vital signs; said program server for storing a program and/or data for causing said detecting means to operate; and said information server for communicating with said terminal; in said vital signs detection system according to Claim 1.

25. A program of operating a computer as all or part of said terminal according to Claim 3 capable of being connected to detecting means of detecting vital signs.

26. A program of operating a computer as all or part of said program server according to Claim 4 for communicating with said terminal capable of being connected to detecting means of detecting vital signs, and for storing a program and/or data for causing said detecting means to operate.

27. A program of operating a computer as all or part of said information server according to Claim 5 for communicating with said terminal capable of being connected to detecting means of detecting vital signs.

28. A program of operating a computer as all or part of said processing means of said vital signs processing means of said

vital signs processing apparatus according to Claim 6.

29.   A program of operating a computer to carry out all or part of said first, second, third, and fourth steps in said health control method according to Claim 17.

30.   Data structure which can be used in a computer and comprises all or part of the data structure in said first, second, third, and fourth steps in said health control method according to Claim 17.

31.   A vital signs detection system comprising:

a terminal having detecting means of detecting, vital signs corresponding to an inspection item;

a program server of storing a program and/or data to make said detecting means operate; and

an inspection item judgment server of communicating with said terminal and thereby judging said inspection item according to said vital signs; wherein:

when said terminal is started, said inspection item judgment server judges a predetermined inspection item according to said vital signs corresponding to said predetermined inspection item; and according to the result of said judgment, said inspection item judgment server makes said terminal download a predetermined program and/or data from said program server, and thereby makes said detecting means operate according to said predetermined program and/or data.

32.   A vital signs detection system comprising:

a terminal having detecting means of detecting, vital signs corresponding to an inspection item;

a program server of storing a program and/or data to make said detecting means to operate; and

an inspection item judgment server of communicating with said terminal and thereby judging said inspection item according to said vital signs; wherein:

when said detecting means detects said vital signs corresponding to a predetermined inspection item, said terminal transmits said vital signs to said inspection item judgment server;

on receiving said detected vital signs, said inspection item judgment server judges said predetermined inspection item according to said vital signs, and according to the result of said judgment, determines whether the operation of said detecting means is to be continued or not; and

when the result of said determination is the continuation of the operation of said detecting means, said inspection item judgment server makes said detecting means perform the same operation as previous, or alternatively, to download a predetermined program and/or data from said program server and thereby operate according to said predetermined program and/or data.

33. The vital signs detection system according to Claim 31 or 32 wherein: said detecting means is connected to said terminal

in an attachable and detachable manner; and in response to said download of said predetermined program and/or data, the type and/or the number of said detecting means connected to said terminal is changed.

34.   The vital signs detection system according to Claim 31 or 32 wherein said download of said predetermined program and/or data is carried out in order to change said inspection item to which said operation of said detecting means corresponds.

35.   The vital signs detection system according to Claim 31 or 32 wherein said download of said predetermined program and/or data is carried out in order to change the inspection method for the same inspection item to which said operation of said detecting means corresponds.

36.   The vital signs detection system according to Claim 31 or 32 wherein:

said judgment by said inspection item judgment server is carried out according to specific vital signs as said vital signs, which is in specific relevance to said organism of detection target of said detecting means;

said terminal is provided with an ID corresponding to said specific vital signs; and

said inspection item judgment server refers to said ID of said terminal, and thereby carries out said judgment according to said specific vital signs.

37.   The vital signs detection system according to Claim 36

wherein said ID is transmitted from said terminal to said

inspection item judgment server, whereby said inspection item

judgment server can refer to said ID.

38.   The vital signs detection system according to Claim 36

wherein said inspection item judgment server retains said ID

in advance.

39.   A terminal comprising detecting means of detecting, from

an organism, vital signs corresponding to a predetermined

inspection item, wherein

when at start-up, an inspection item judgment server for

judging said inspection item according to said vital signs judges

a predetermined inspection item according to said vital signs

corresponding to said predetermined inspection item,

according to the result of said judgment, said terminal

downloads a predetermined program and/or data from a program

server for storing a program and/or data to make said detecting

means operate, and thereby causes said detecting means to operate

according to said predetermined program and/or data.

40.   A terminal comprising detecting means of detecting, from

an organism, vital signs corresponding to inspection item,

wherein:

when said detecting means detects a vital signs

corresponding to a predetermined inspection item, said terminal

transmits said vital signs to an inspection item judgment server

of communicating with said terminal and thereby judging said

inspection item according to said vital signs;

on receiving said detected vital signs, said inspection
item judgment server judges said predetermined inspection item
according to said vital signs, and according to the result of
said judgment, determines whether the operation of said detecting
means is to be continued or not; and

when the result of said determination is the continuation
of the operation of said detecting means, said inspection item
judgment server makes said detecting means perform the same
operation as previous, or alternatively, download a
predetermined program and/or data from a program server for
storing a program and/or data to make said detecting means operate,
and thereby operate according to said predetermined program
and/or data.

41.   The terminal according to Claim 39 or 40 wherein: said
detecting means is connected to said terminal in an attachable
and detachable manner; and in response to said download of said
predetermined program and/or data, the type and/or the number
of said detecting means connected to said terminal is changed.

42.   The terminal according to Claim39 or 40 wherein said
download of said predetermined program and/or data is carried
out in order to change said inspection item to which said operation
of said detecting means corresponds.

43.   The terminal according to Claim 39 or 40 wherein said
download of said predetermined program and/or data is carried

out in order to change the inspection method for the same inspection item to which said operation of said detecting means corresponds.

44. A terminal according to Claim 39 or 40 wherein:

said terminal is provided with an ID which corresponds to specific vital signs as said vital signs, in specific relevance to said organism of detection target of said detecting means and is thereby used for said judgment by said inspection item judgment server; and

said inspection item judgment server refers to said ID of said terminal, and thereby carries out said judgment according to said specific vital signs.

45. A vital signs detection method comprising:

a step including a detecting step of detecting, from an organism, vital signs corresponding to an inspection item;

a program storing step of storing a program and/or data to make detecting step carry out; and

an inspection item judging step of judging said inspection item according to said vital signs detected by said detecting step; wherein:

when said detecting step is started, in said inspection item judging step, said predetermined inspection item is judged according to said vital signs corresponding to said predetermined inspection item; and according to the result of said judgment, a predetermined program and/or data stored in said program

storing step is downloaded for said step including said detecting
step; whereby in said detecting step, operation is carried out
according to said predetermined program and/or data.

46.   A vital signs detection method comprising:

a step including a detecting step of detecting, from an
organism, vital signs corresponding to a predetermined
inspection item;

a program storing step of storing a program and/or data
make said detecting step carry out; and

an inspection item judging step of judging said inspection
item according to said vital signs detected by said detecting
step; wherein:

when said vital signs corresponding to said predetermined
inspection item is detected in said detecting step, said vital
signs is transmitted, in said step including said detecting step,
to said inspection item judging step for processing;

in said inspection item judging step, said predetermined
inspection item is judged according to said detected vital signs,
and according to the result of said judgment, it is determined
whether said detecting step is to be continued or not; and

when the result of said determination is the continuation
of said detecting step, the same operation as previous is carried
out in said detecting step, or alternatively, a predetermined
program and/or data stored in said program storing step is
downloaded and thereby operation is carried out according to

said predetermined program and/or data.

47.   A program of operating a computer as all or part of: said terminal having detecting means of detecting, from an organism, vital signs corresponding to a predetermined inspection item; said program server for storing a program and/or data to make said detecting means operate; and said inspection item judgment server for communicating with said terminal and thereby judging said inspection item according to said vital signs; in said vital signs detection system according to Claim 31.

48.   A program of operating a computer as all or part of: said terminal having detecting means of detecting, from an organism, vital signs corresponding to a predetermined inspection item; said program server for storing a program and/or data to make said detecting means operate; and said inspection item judgment server for communicating with said terminal and thereby judging said inspection item according to said vital signs; in said vital signs detection system according to Claim 32.

49.   A computer-processable medium carrying a program of operating a computer as all or part of: said terminal capable of being connected to detecting means of detecting vital signs; said program server for storing a program and/or data to make said detecting means to operate; and said information server for communicating with said terminal; in said vital signs detection system according to Claim 1.

50.   A computer-processable medium carrying a program of

operating a computer as all or part of: said terminal having detecting means of detecting, from an organism, vital signs corresponding to a predetermined inspection item; said program server for storing a program and/or data of operating said detecting means operate; and said inspection item judgment server for communicating with said terminal and thereby judging said inspection item according to said vital signs; in said vital signs detection system according to Claim 31.

51.   A computer-processable medium carrying a program of operating a computer as all or part of: said terminal having detecting means of detecting, from an organism, vital signs corresponding to a predetermined inspection item; said program server for storing a program and/or data for causing said detecting means to operate; and said inspection item judgment server for communicating with said terminal and thereby judging said inspection item according to said vital signs; in said vital signs detection system according to Claim 32.